

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. <b>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</b>					
1. REPORT DATE (DD-MM-YYYY) 14-05-2009		2. REPORT TYPE Final Report		3. DATES COVERED (From – To) 15 May 2008 - 26-Aug-09	
4. TITLE AND SUBTITLE  Cultural Variation in Vigilance and Precaution Themes				5a. CONTRACT NUMBER FA8655-08-2-3037	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)  Dr. Ernest T Lawson				5d. PROJECT NUMBER	
				5d. TASK NUMBER	
				5e. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Queen's University - Belfast 2-4 Fitzwilliam Street Belfast BT7 1NN United Kingdom				8. PERFORMING ORGANIZATION REPORT NUMBER  N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)  EOARD Unit 4515 BOX 14 APO AE 09421				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) Grant 08-3037	
12. DISTRIBUTION/AVAILABILITY STATEMENT: Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
<b>14. ABSTRACT</b> RESEARCH OBJECTIVES Determine the degree to which different precautionary themes are dominant in various target populations and how these themes are acquired Assess cultural signals of potential danger: are there different kinds of potential danger in different cultures? Do cultural ideologies, notably religion, modify people's notion of hidden or invisible danger? Are people from different cultures considered dangerous and if so, in what circumstances? Does this change with experience? Do the precaution themes in collective rituals reflect/reinforce the precautionary preoccupations of the target populations?  In year 1 we did the following: Analyzed clinical literature to identify culturally specific precautionary preoccupations. Conducted preliminary ethnographic analysis of target population ritual systems to identify precautionary themes in collective rituals and any variation in and between systems. Constructed protocols for behavioral and experimental studies. This is with the intent to conduct cross-cultural experiments utilizing potential threat scenarios and relevant/less-relevant satiating behaviors with both primary school age children and normal adults. Developed our PhD students research project which will identify correlations between inferences from the Lawson and McCauley theory of ritual competence (the Ritual Form Hypothesis in particular) and the expression of precautionary themes in collective rituals, identify the precautionary ideologies present in disparate ritual systems and compare them, and investigate the continuum between individual precautionary measures and collective/cultural rituals. Activity: With PhD student, conducted a survey of clinical (anxiety disorders) and ethnographic (cultural rituals) literature for dominance of precaution preoccupations in target populations; Developed survey instruments; Piloted behavioral study instruments in South Africa; Presented preliminary framework and pilot findings at invited institutions (University of South Africa and the University of KwaZulu, Natal). Coordination meeting with other Precaution project teams June 2009; Constructed preliminary draft of target article on preliminary framework and theory with PhD student (Ms Michal Fux); Preliminary setup of South Africa and UK field sites. Including forays into the field, meeting key community members (e.g. inyanga, sangoma, nKosi etc); Held collaboration meetings with key scholars in Precaution Project and those at field sites.					
<b>15. SUBJECT TERMS</b> EOARD, Behavioral Science, Psychology					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UL	18, NUMBER OF PAGES  13	19a. NAME OF RESPONSIBLE PERSON TAMMY SAVOIE, Lt Col, USAF
a. REPORT UNCLAS	b. ABSTRACT UNCLAS	c. THIS PAGE UNCLAS			19b. TELEPHONE NUMBER (Include area code) +44 (0)1895 616459

## *Lawson Project – Cultural Variation in Vigilance and Precaution Themes*

### Year 1 Report (2008-2009)

#### Project summary

This study is designed to contribute to understanding the degree to which different precautionary themes are dominant in various target populations and how these themes are acquired.

In year 1 we aimed to:

- Analyze clinical literature to identify culturally specific precautionary preoccupations.
- Conduct preliminary ethnographic analysis of target population ritual systems to identify precautionary themes in collective rituals and any variation in and between systems.
- Construct protocols for behavioral and experimental studies. This is with the intent to conduct cross-cultural experiments utilizing potential threat scenarios and relevant/less-relevant satiating behaviors with both primary school age children and normal adults.
- Develop our PhD student's research project which will identify correlations between inferences from the Lawson and McCauley theory of ritual competence (the Ritual Form Hypothesis in particular) and the expression of precautionary themes in collective rituals, identify the precautionary ideologies present in disparate ritual systems and compare them, and investigate the continuum between individual precautionary measures and collective/cultural rituals.

#### Activity

- With PhD student, conducted a survey of clinical (anxiety disorders) and ethnographic (cultural rituals) literature for dominance of precaution preoccupations in target populations
- Developed survey instruments (attached)
- Piloted behavioral study instruments in South Africa
- Presented preliminary framework and pilot findings at invited institutions (University of South Africa and the University of KwaZulu, Natal).
- Coordination meeting with other Precaution project teams – June 2009
- Constructed preliminary draft of target article on preliminary framework and theory with PhD student (Ms Michal Fux)
- Preliminary setup of South Africa and UK field sites. Including forays into the field, meeting key community members (e.g. inyanga, sangoma, nKosi etc).
- Held collaboration meetings with key scholars in Precaution Project and those at field sites
  - Prof Dan Stein (Psychiatry, University of Cape Town)
  - Prof David Spurrett (Cognitive Science, University of KwaZulu, Natal, UKZN)
  - Prof Robert Fincham (Geography, UKZN)
  - Prof D. McCracken (Dean of Faculty of Humanities, UKZN)
  - Prof Nhlanhla Mkhize (Psychology, UKZN)
  - Prof Ignatius Gous (Cognitive Science, University of South Africa, UNISA)
  - Prof David Eilam (Zoology, Tel Aviv University, TAU)
  - Prof Pascal Boyer (Psychology, Washington University at Saint Louis, MO, WUSTL)

## PRECAUTIONARY SALIENCE STUDY: DATA SHEET

### Principle Investigators

Dr Joel Mort, AFRL/RHXB and Queen's University - Belfast

Dr E. Thomas Lawson, Queen's University - Belfast

### PROTOCOL SEQUENCE

1. Consent form
2. Collect participant information (non-identifiable, number coded)
3. Survey scales A – C and Narrative survey (presented in randomized order).
4. Compensation

### CONSENT FORM

(To participant)

Give them the form and say:

I will now read to you what it says on the form I have just given you. Please listen closely.

[read form]

Have you understood this form? If so please sign where indicated.

## **PARTICIPANT INFORMATION**

I will now ask you a few general questions. Ready?

<b>ID number</b>	
<b>Age</b>	
<b>Ethnic background</b>	
<b>Education level</b>	
<b>Environment context (home)</b>	
<b>Environment context (work)</b>	
<b>Language competency</b>	accept/reject
<b>Date</b>	

## SURVEY A

### Likert Scale (20 items)

I will now read you a series of phrases. Please indicate to what extent you agree with these phrases using the scale you see in front of you (indicate Likert Scale Aid). You may tell me either the number or the phrase. This is an example (below).

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Disagree Somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree

### Example

I like the smell of cooking fish. (1 or Strongly Disagree, etc)

Ready?

Item #	Scale phrase (I worry about...)	PDD	Answer
1	...keeping my hands and body clean	CC	1 2 3 4 5 6 7
2	...walking alone in the dark	PA	1 2 3 4 5 6 7
3	...seeing a strange person walking towards me	PA	1 2 3 4 5 6 7
4	...eating raw meat	CC	1 2 3 4 5 6 7
5	...doing something embarrassing in public	SS	1 2 3 4 5 6 7
6	...my co-workers disliking me	SS	1 2 3 4 5 6 7
7	...not earning enough money	DR	1 2 3 4 5 6 7
8	...a snake getting into the house	PA	1 2 3 4 5 6 7
9	...touching someone's sores	CC	1 2 3 4 5 6 7
10	...not having enough to eat	DR	1 2 3 4 5 6 7
11	...paying my bills	DR	1 2 3 4 5 6 7
12	...touching a dead cat	CC	1 2 3 4 5 6 7
13	...being attacked by a dog	PA	1 2 3 4 5 6 7
14	...not having enough clothes to wear	DR	1 2 3 4 5 6 7
15	...being made fun of by my friends	SS	1 2 3 4 5 6 7
16	...not finding a [mate]	SS	1 2 3 4 5 6 7
17	...spreading germs to other people	CC	1 2 3 4 5 6 7
18	...someone stealing from me	DR	1 2 3 4 5 6 7
19	...getting into a road accident	PA	1 2 3 4 5 6 7
20	...thinking impure thoughts about someone	SS	1 2 3 4 5 6 7

## SURVEY B

### Thurstone Scale (24 items)

I will now read you a series of questions. I will read each question twice. Please answer “yes or no” to each question. (Investigator will read as “Is [A] more worrying than [B]?”)

Example: Is driving a car to Johannesburg more comfortable than taking the bus. Y or N?

#	Scale questions ([A] / [B])	Cond.	Answer
1	Eating raw meat / Walking alone at night	CC/PA	Y or N
2	Touching a dead cat / Seeing someone with a gun	CC/PA	Y or N
3	Walking alone at night / Eating raw meat	PA/CC	Y or N
4	Seeing someone with a gun / Touching a dead cat	PA/CC	Y or N
5	Walking in bad smelling water / Person stealing your wallet	CC/DR	Y or N
6	Dirty substance on your hands / Running out of food	CC/DR	Y or N
7	Person stealing your wallet / Walking in bad smelling water	DR/CC	Y or N
8	Running out of food / Dirty substance on your hands	DR/CC	Y or N
9	Eating raw meat / Disappointing your friends	CC/SS	Y or N
10	Touching a dead cat / Not finding a [mate/friend]	CC/SS	Y or N
11	Disappointing your friends / Eating raw meat	SS/CC	Y or N
12	Not finding a [mate/friend] / Touching a dead cat	SS/CC	Y or N
13	Snake in the house / Someone stealing your [wallet]	PA/DR	Y or N
14	Strange person walking toward you / Having too little food	PA/DR	Y or N
15	Someone stealing your [wallet] / Snake in the house	DR/PA	Y or N
16	Having too little food / Strange person walking toward you	DR/PA	Y or N
17	Seeing signs of a leopard / Disappointing your friends	PA/SS	Y or N
18	Walking alone at night / Co-workers don't like you	PA/SS	Y or N
19	Disappointing your friends / Seeing signs of a leopard	SS/PA	Y or N
20	[Co-workers/Friends] don't like you / Walking alone at night	SS/PA	Y or N
21	Person stealing your wallet / Disappointing your friends	DR/SS	Y or N
22	Having too little food / Not finding a [mate/friend]	DR/SS	Y or N
23	Disappointing your friends / Persons stealing your wallet	SS/DR	Y or N
24	Not finding a [mate] / Having too little food	SS/DR	Y or N

## SURVEY C

### Ranking Scale (16 items)

#### Instructions:

Here is a list of situations you may sometimes think about. Even if you don't please use your best guess and rank these items from most to least worrying. (1 = most worrying, 16 = least worrying)

Scale phrase	Rank
If my boss does not like me	
Running out of food to eat	
People stealing my wallet	
Having too little money	
Lose my job	
Have people make fun of me	
Not have a mate	
Disappoint my friends	
See the footprint of leopard	
Walk alone at night	
Meet someone from somewhere I don't know about	
See someone with a gun	
Sit on a slimy chair	
Touch a dead rat	
Eat strange smelling meat	
Walk in dirty water	

## SURVEY D1

### Narrative Survey

#### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

PAC vs CCc	
Vignette	
A man was wading in a [river, sea] washing a [harmful substance] from his body. It is the only water source in the area. A [crocodile, shark] suddenly appeared and attacked him, biting him several times. He was found, nearly dead, by his friends and taken home. After he recovered he noticed that he had gotten a [substance] that resembled the harmful substance on his body again.	
Target questions	Answers (circle one)
Do you think the man <i>should</i> go back to the same river to wash again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that he will be attacked if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back and not wash the substance from his body?	1 2 3 4 5 6 7 less more
How likely is it that the substance will harm him if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>



## SURVEY D2

### Narrative Survey

#### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

PAC vs DRc	
Vignette	
A man was wading in a [river, sea] trying to catch fish for his employer. This river is the best place to catch a lot of fish. A [crocodile, shark] suddenly appeared and attacked him, biting him several times. He was found, nearly dead, by his friends and taken home. His employer was very angry that he had failed to catch any fish and lowered his pay. He said that he would lose his job if the man did not catch more fish next time.	
Target questions	Answers
Do you think the man <i>should</i> go back to fish again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that he will be attacked if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back?	1 2 3 4 5 6 7 less more
How likely is it that he will lose his job if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>

### SURVEY D3

#### Narrative Survey

##### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

PAC vs SSc	
Vignette	
A man was wading in a [river, sea] trying to catch fish for his employer. This river is the best place to catch a lot of fish. A [crocodile, shark] suddenly appeared and attacked him, biting him several times. He was found, nearly dead, by his friends and taken home. His employer was very angry that he had failed to catch any fish, demoted and publicly [criticized] him. His co-workers and friends did not speak to him as much after that because he had not caught any fish.	
Target questions	Answers
Do you think the man <i>should</i> go back to fish again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that he will be attacked if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back?	1 2 3 4 5 6 7 less more
How likely is it that his employer, co-workers, and friends will criticize him if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>

## SURVEY D4

### Narrative Survey

#### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

CCc vs DRc	
Vignette	
<p>A man is wading in a [river, sea] where a strange smelling substance has been dumped. He wants to fish there to catch fish for his employer because it is the best river to catch a lot of fish. Only a short time after he began wading the man notices red blotches on his skin, starts to feel sick, and passes out. He was found, nearly dead, by his friends and taken home. His employer was very angry that he had failed to catch any fish and lowered his pay. His employer said that the man would lose his job if he did not catch more fish next time.</p>	
Target questions	Answers
Do you think the man <i>should</i> go back again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that he will get sick again if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back?	1 2 3 4 5 6 7 less more
How likely is it that he will lose his job if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>

## SURVEY D5

### Narrative Survey

#### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

CCc vs SSc	
Vignette	
A man is wading in a [river, sea] where a strange smelling substance has been dumped. in order to catch fish for his employer because it is the best river to catch a lot of fish. Only a short time after he began wading the man notices red blotches on his skin, starts to feel sick, and passes out. He was found, nearly dead, by his friends and taken home. His employer was very angry that he had failed to catch any fish, demoted and publicly [criticized] him. His co-workers and friends did not speak to him as much after that because he had not caught any fish.	
Target questions	Answers
Do you think the man <i>should</i> go back to fish again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that he will get sick again if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back?	1 2 3 4 5 6 7 less more
How likely is it that his employer, co-workers, and friends will criticize him if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>

## SURVEY D6

### Narrative Survey

#### Instructions:

I will now read a story and ask you questions about it. The questions will be either yes/no questions or you will need to answer how likely something is on a scale from 1 to 7 (less to more likely). Ready?

#### Narratives and question set

(question order will be randomized)

DRc vs SSc	
Vignette	
<p>A man is told by his employer to go to the river to catch some fish. He goes, catches the fish and gives them to his employer. After work he meets some friends including a woman he [wants to date/likes]. Though he washed himself thoroughly his friends don't want to be around him. The woman tells him if he smells like the river and fish again she will not [date/see] him again. The next day his employer tells him to go to the river to catch more fish. The man tells his employer he doesn't want to but his employer tells him he will lose his job if he does not do it.</p>	
Target questions	Answers
Do you think the man <i>should</i> go back to catch fish again?	<i>yes / no</i>
How likely is it that he <i>will</i> go back?	1 2 3 4 5 6 7 less more
How likely is it that the lady will date him if he does go back?	1 2 3 4 5 6 7 less more
How likely is it that he will not go back?	1 2 3 4 5 6 7 less more
How likely is it that he will lose his job if he doesn't go back?	1 2 3 4 5 6 7 less more
Would you go back if it were you?	<i>yes / no</i>